INDEX TO VOLUME 40 (2003)

RESEARCH-EXPOSITORY SURVEYS

Arthur, James. *The principle of functoriality*, 39

Berry, Michael. *Making light of mathematics*, 229

Brezis, Haim. *The interplay between analysis and topology in some nonlinear PDE problems*, 179

Diaconis, Persi. *Patterns in eigenvalues: The 70th Josiah Willard Gibbs Lecture*, 155

Franks, John. *Rotation numbers and instability sets*, 263

Freedman, Michael H.; Kitaev, Alexei; Larsen, Michael J.; and Wang, Zhenghan. *Topological quantum computation*, 31

Hauser, Herwig. *The Hironaka theorem on resolution of singularities (Or: A proof we always wanted to understand)*, 323

Hofbauer, Josef and Sigmund, Karl. *Evolutionary game dynamics*, 479

Kitaev, Alexei. *See* Freedman, Michael H.

Larsen, Michael J. *See* Freedman, Michael H.

Levin, Simon A. *Complex adaptive systems: Exploring the known, the unknown and the unknowable*, 3

Saari, Donald G. *Editor's Comment*, 1

Sarnak, Peter. *Spectra of hyperbolic surfaces*, 441

Serre, Jean-Pierre. *On a theorem of Jordan*, 429

Shelah, Saharon. *Logical dreams*, 203

Sigmund, Karl. *See* Hofbauer, Josef

Stanley, Richard P. *Recent progress in algebraic combinatorics*, 55

Taylor, Jean E. *Some mathematical challenges in materials science*, 69

Urbański, Mariusz. *Measures and dimensions in conformal dynamics*, 281

Varadhan, S. R. S. *Stochastic analysis and applications*, 89

Wang, Zhenghan. *See* Freedman, Michael H.

Witten, Edward. *Physical law and the quest for mathematical understanding*, 21

BOOK REVIEWS

Bass, Hyman and Lubotzky, Alexander. *Tree lattices*, reviewed by Lucy Lifschitz, 247

Borel, Armand. *Essays in the history of Lie groups and algebraic groups*, reviewed by Brian Parshall, 253

Bourgain, J. *Global solutions of nonlinear Schrödinger equations*, reviewed by Gigliola Staffilani, 99

Chen, So-Chin and Shaw, Mei-Chi. *Partial differential equations in several complex variables*, reviewed by Steven G. Krantz, 529

Grattan-Guinness, I. *The search for mathematical roots, 1870-1940: Logics, set theories, and the foundations of mathematics from Cantor through Russell to Gödel*, reviewed by William Ewald, 125

Greaves, George. *Sieves in number theory*, reviewed by Heini Halberstam, 109

Harris, Michael and Taylor, Richard. *The geometry and cohomology of some simple Shimura varieties*, reviewed by Alan Roche, 239

Hélein, Frédéric. *Constant mean curvature surfaces, harmonic maps and integrable systems*, reviewed by Robert M. Hardt, 121

Jorgenson, Jay and Lang, Serge. *Spherical inversion on* $\mathrm{Sl}(n, \mathbb{R})$, reviewed by Bernhard Krötz, 137

Lakshmikantham, V. and Trigiante, Donato. *Theory of difference equations — numerical methods and applications*, reviewed by Walter Kelley, 259

Lang, Serge. *See* Jorgenson, Jay

Lubotzky, Alexander. *See* Bass, Hyman

Mann, Avinoam; Regev, Amitai; Rowen, Louis; Saltman, David J.; and Small, Lance W. (eds.). *Selected papers of S. A. Amitsur with commentary*, reviewed by Edward Formanek, 131

Papastavridis, John G. *Analytical mechanics: A comprehensive treatise on the dynamics of constrained systems; for engineers, physicists and mathematicians*, reviewed by Jair Koiller, 405

Parshall, Karen Hunger and Rice, Adrian C. (eds.). *Mathematics unbound: The evolution of an international mathematical research community, 1800–1945*, reviewed by David E. Rowe, 535
Regev, Amitai. *See* Mann, Avinoam
Rice, Adrian C. *See* Parshall, Karen Hunger
Rossmann, Wulf. *Lie groups: An introduction through linear groups*, reviewed by Peter E. Trapa, 521
Rowen, Louis. *See* Mann, Avinoam
Saltman, David J. *See* Mann, Avinoam
Shaw, Mei-Chi. *See* Chen, So-Chin
Small, Lance W. *See* Mann, Avinoam
Taylor, Richard. *See* Harris, Michael
Timmesfeld, Franz Georg. *Abstract root subgroups and simple groups of Lie-type*, reviewed by Richard Weiss, 151
Trigiante, Donato. *See* Lakshmikantham, V.
Walnut, David F. *An introduction to wavelet analysis*, reviewed by Palle E. T. Jorgensen, 421
Wolfram, Stephen. *A new kind of science*, reviewed by Steven G. Krantz, 143